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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,514	11/14/2003	Peter T. Anderson	128410-2 (13865US02)	9965

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EXAMINER

LE, JOHN H

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,514

Applicant(s)

ANDERSON ET AL.

Examiner

John H Le

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-22 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 and 13-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 20 and 22 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/14/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species 2 (Claims 12, 20-22) in Paper mailed on 10/18/2004 is acknowledged. The traversal is on the ground(s) that the search and examination of the entire application could be made without serious burden, and separated classification has not been shown. This is not found persuasive because the system having different elements that providing different functions. Thus, the search and examination would make with serious burden.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 7-11 and 13-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper mailed on 10/18/2004.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 12 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Schneider (US 2001/0045826).

Regarding claim 12, Schneider discloses an electromagnetic tracking system (22) comprising a magnetic field generating unit (40) driven by a drive signal (Abstract, [0014], [0047]); a field sensing unit (26) having a sensing signal responsive to a changing magnetic field, said changing magnetic field including a position-dependent field produced by said magnetic field generating unit ([0014], [0048]-[0050]), the generating (40) and sensing (26) units being arranged to generate and to sense, respectively, an electromagnetic field in an arena of interest ([0050]), and wherein at least one of said units is movable (40)([0027]); signal measurement and conditioning circuitry connected to said units to sample and digitize signal data (A/D and D/a converter) for the field generating and field sensing units ([0048]-[0050]); a distorter (30) having a known structure disposed at a selected location in the arena of interest ([0026]), and a processor (24) operative on the sampled and digitized signal data (A/D and D/a converter) to determine relative coordinates and orientations of said field generating or field sensing unit ([0048]-[0050]), said processor (24) modeling the distorter (30) ([0054] and the generating and sensing units to generate modeled signal data and fitting said modeled signal data (a three-dimensional curve fit) to measured signal values to determine coordinates and orientations of said field generating and field sensing units ([0050]).

Regarding claim 22, Schneider discloses said processor uses an integral method of correction to compensate for distortion caused by said distorter (e.g. [0054]).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider (US 2001/0045826) in view of Jacobs et al. (USP 6,636,757).

Regarding claim 20, Schneider fails to disclose the distorter comprises a shielding device positioned in relation to a fluoroscopic detector.

Jacobs et al. disclose the distorter comprises a shielding device positioned in relation to a fluoroscopic detector (e.g. Col.2, lines 26-36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to inform the distorter comprises a shielding device positioned in relation to a fluoroscopic detector as taught by Jacobs et al. in an electromagnetic tracking system of Schneider for the purpose of providing a method and apparatus for electromagnetic navigation of a surgical probe near a metal object (Jacobs et al., Col.2, lines 22-24).

Allowable Subject Matter

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7. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 21, none of the prior art of record teaches or suggests the combination of an electromagnetic tracking system comprising a magnetic field generating unit driven by a drive signal, a field sensing unit having a sensing signal responsive to a changing magnetic field, said changing magnetic field including a position-dependent field produced by said magnetic field generating unit, the generating and sensing units being arranged to generate and to sense, respectively, an electromagnetic field in an arena of interest, and wherein at least one of said units is movable, signal measurement and conditioning circuitry connected to said units to sample and digitize signal data for the field generating and field sensing units, a distorter having a known structure disposed at a selected location in the arena of interest, and a processor operative on the sampled and digitized signal data to determine relative coordinates and orientations of said field generating or field sensing unit, said processor modeling the distorter and the generating and sensing units to generate modeled signal data and fitting said modeled signal data to measured signal values to determine coordinates and orientations of said field generating and field sensing units, wherein said processor models said distorter as a ring model. It is these limitations as they are claimed in the combination with other limitations of claim,

which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 8:00 - 4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

October 30, 2004


John Barlow
Supervisory Patent Examiner
Technology Center 2800